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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/569,511

02/27/2006

Masayuki Tsuchiya

0607

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07/06/2007

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1423 POWHATAN STREET, UNIT ONE

ALEXANDRIA, VA 22314

EXAMINER

LIN, KUANG Y

ART UNIT

PAPER NUMBER

1725

MAIL DATE

DELIVERY MODE

07/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,511	Applicant(s) TSUCHIYA ET AL.	
	Examiner Kuang Y. Lin	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 4 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 6,904,951 to Murayama et al.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 4 is also rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,053,997 to Nakamura et al. and further in view of US 6,904,951 to Murayama et al.

Nakamura et al. substantially show the invention as claimed except that they do not show to provide a projection portion formed around the gate hole. However, Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious to further provide the gate 7 of Nakamura et al. with the projection 41 of Murayama et al. in view of the advantage.

6. Claims 6 and 8 insofar as definite are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253.

JP '253 substantially shows the invention as claimed except that it uses copper foil, aluminum foil, or other kind of metallic foil for covering the aluminum alloy (see, for example, upper left col. line 1+ and upper right col. of page 352, line 7+, page 353, upper left col. line 6+ and lower left col. line 16+, and figures 1 and 6). However, the type of foil used depends on the alloy to be covered and would have been obvious to those of ordinary skill in the casting art to select an appropriate type of foil through routine experimentation.

7. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253 as applied to claim 6 above, and further in view of Murayama et al.

Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious to further provide JP '253 with the gate having the projection 41 of Murayama et al. in view of the advantage.

8. Claims 7 and 9 are also rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-221,253 as applied to claim 6 above, and further in view of US 6,053,997 to Nakamura et al. and US 6,904,951 to Murayama et al.

Murayama et al. show to provide a projection 41 formed all around the gate hole facing the injection path for removing the oxide skin. It would have been obvious to further provide JP '253 with the gate 7 of Nakamura et al. and having the projection 41 of Murayama et al. in view of the advantage.

9. Applicant's arguments filed June 15, 2007 have been fully considered but they are not persuasive.

a. In pages 6-7 of the response applicant stated that the improved step as claimed includes covering a circumference of the semi-molten casting iron material with steel sheet, not copper foil, having thickness of 0.1-0.5 mm thick prior to being injected through the gate. However, in JP 253, a copper foil having thickness of 0.01-1 mm thick is used to wrap around a circumference of Al-Si-Cu alloy (see, page 352, upper right col.) Thus, the thickness falls within the claimed range and thus can also be called as "copper sheet". Further, the melting point of copper foil/sheet is higher than the Al-Si-Cu (melting point of copper is 1804 degree C. and of Al is 660 degree C.) Therefore, when a semi-molten cast iron is to be cast, it would have been obvious to cover the same with a material having higher melting point than the cast iron in view of teaching of JP '253.

b. Applicant further stated that the billet of applicant's method is not wrapped completely. However, the scope of the claim does not exclude that feature and

does not include stated feature that both end faces of the circular billet are left uncovered. Further, the original specification does not set forth as how the billet is covered.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP§706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

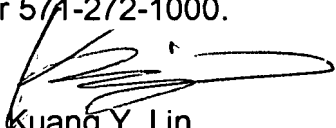
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan J. Johnson can be reached on 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kuang Y. Lin
Primary Examiner
Art Unit 1725

6-28-07